

The display of the Short-clawed Lark *Certhilauda chuana* and comments on the genus *Certhilauda*

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The Short-clawed Lark is a resident endemic of southern Africa, restricted to c. 25,000 square kilometres subdivided between two geographical areas, one in southeastern Botswana and adjacent South Africa (south to the border region between the Transvaal, Orange Free State and northern Cape) and a second area on the Pietersburg plateau (Dean & Keith 1992). The species is one of the least known birds of southern Africa (Maclean 1985a) and most of its plumage characters have been appreciated correctly only recently (Newman 1983, 1989, Sinclair 1984, Clancey 1985, Hustler 1985, Hunter 1990, Robertson 1991, Dean & Keith 1992). The spectacular aerial display of the Short-clawed Lark has been described several times (Newman 1983, 1989, Sinclair 1984, Hunter 1990, Robertson 1991) and it is therefore very unfortunate that Dean & Keith (1992) ignored this knowledge. The Short-clawed and Long-billed *C. curvirostris* Larks are considered a superspecies currently placed in *Certhilaudis* (Hall & Moreau 1970, Clancey 1985, Dean & Keith 1992), in which the Karoo *C. albescens*, Dune *C. erythrochlamys* and Red *C. burra* Larks are also included (Dean & Keith 1992). Maclean (1969, 1985b), however, included all of these species in the genus *Mirafra*.

Observations of Short-clawed Larks were made for more than ten years in southeastern Botswana (NDH), where the species has been studied in detail since 1991 (MH). DA has observed Short-clawed and Long-billed Larks throughout South Africa for many years.

Display of the Short-clawed Lark

Male Short-clawed Larks frequently perform a spectacular aerial display flight during the breeding season to enhance territorial advertisement. The male flies off from a low bush or another slightly elevated perch and, after a rapid, low horizontal flight, suddenly ascends vertically. At 5 to 20 m high the bird stalls, nose-dives and descends vertically, with wings closed and tail slightly fanned. The wings are only opened again close to the ground, just before the bird alights. Occasionally, the bird does not land again and immediately repeats the display flight: up to four displays in a row have been observed. The descent is usually accompanied by a very high-pitched whistling call, *ooeeeeeee*. The height of the ascent seems to be related to the type of habitat: in very open vegetation 6–10 m is the norm, but in more dense *Acacia* bushveld males ascend above tree height, sometimes to over 20 m. The display flight of the Short-clawed Lark therefore is virtually identical to that of the Long-billed Lark (Macdonald 1952,

Newman 1983, Sinclair 1984, Maclean 1985b, Hunter 1990). The Long-billed and Short-clawed Larks also give similar clear whistling vocalizations.

Sometimes the Shortclawed Lark makes a fluttering low flight (not accompanied by audible wing-claps) as an introduction to a terrestrial courtship of the female. The male then walks in deliberate small circles close to her with the chest thrown out, the wings drooped, the tail cocked up vertically, and the rufous rump-feathers raised. This display always preceded the copulations observed, though it was not always followed by copulation.

Discussion

Dean & Keith (1992) state that the male Short-clawed Lark "displays in fluttering flight with wings clapping; straight and on same plane, low down over dense 1 m tall grass". We cannot but assume that this is a mistake for another (probably *Mirafra*) lark, as there is very little in this description that can possibly fit the Short-clawed Lark. The typical nose-dive display has been described above and the species never makes any audible wing claps, nor does it occur in dense tall grass.

With the highly typical display flight of the Short-clawed Lark being re-appreciated, is there any further argument for close affinities in the genus *Certhilauda* (sensu Dean & Keith 1992)? No other southern African lark species make a display flight that resembles the distinct nose-dive of Short-clawed and Long-billed Larks. The long, pointed wings and long tail of these species possibly constitute essential morphological characters to enable the performance of this demanding acrobatic flight. The 'slimness index' of *curvirostris* and *chuana* is much higher than in the more bulky *Mirafra* larks (Table 1) and approaches the slimness of the larger *Anthus* pipits (*vaalensis*=2760, *leucophrys*=2290 and *similis*=2482). Other slim-built African larks, e.g. Red-capped *Calandrella cinerea*, Dusky *Pynarocorys nigricans* and Rufous-rumped *P. erythropygia* Larks, have similar high indices, i.e. 1908, 2651 and 2396 respectively. Although we do not give any taxonomic weight *per se* to this index, we use it to quantify and stress an aspect of jizz and agility in these birds. Nevertheless, there is an urgent need for a detailed multivariate assessment of allometry in African larks, which is highly likely to reveal new, and strengthen current, insights into both eco-morphological and phylogenetic assemblages.

Measured on the scale of divergence in larks, the other species currently placed in *Certhilauda* have little in common with the *curvirostris/chuana* superspecies (Table 1). They all have the conical, mostly horn-coloured bills (typical of *Mirafra* sensu *largo*), build domed nests, perform cruising, fluttering and hovering display flights, and have a song structurally similar to the Fawn-coloured Lark *Mirafra africanoides*, a closely related slimly-built sandveld specialist (slimness index=1896). If *albescens*, *erythrochlamys* and *burra* represent anything other than well differentiated sand specialist *Mirafra* larks (the detailed evaluation of which is beyond the scope of this paper), then the generic name *Calendulauda* (Roberts 1936) is available for this assemblage. The

TABLE 1
Characteristics of some southern African lark taxa¹

| Genus/species | Nest | Song | Display/song flight | Bill | 'Slimness' ² |
|--|----------------------|--|--|----------------------------------|-------------------------|
| <i>Mirafra</i> | domed | variable, usually including mimicry | cruising, fluttering, hovering + wing-clapping in some species | conical, horn with dark rim | 1483 ± 171 ³ |
| <i>albescens</i> <i>erythrochlamys</i> <i>burria</i> | domed | { staccato introductory notes followed by buzzy bubbling; no mimicry | cruising, fluttering, hovering | thin conical, horn with dark rim | 1647 |
| <i>curvirostris</i> | undomed ⁴ | clear whistles; | vertical rise & stoop | thin conical, horn with dark rim | 1918 |
| <i>chuana</i> | undomed ⁵ | no mimicry | | conical, horn with dark rim | 2414 |
| <i>albofasciata</i> | undomed | no mimicry | occasionally climb + dive/glide ⁷ | long, mostly black | 2410 |
| | | | | long, mostly black | 2347 ⁶ |
| | | | | | 1384 |

¹We consider tongue-markings, nostril coverage, hind claw characteristics and diet poor taxonomic features to differentiate these lark genera.
²'Slimness index' = (Wing chord × tail length)/(Body mass)^{1/3}; (only males); data from Dean & Hockey (1989) and Dean & Keith (1992).

³Ten species: *cantillans*, *passerina*, *albicauda*, *africana*, *ashi*, *angolensis*, *rufocinnamomea*, *apiata*, *africanoides* and *sabota*.

⁴We have no evidence for the statement by Dean & Keith (1992) that domed nests are known from the Long-billed Lark. We follow the evidence provided by D. Allan, W. Tarboton & C. Vernon in Hunter (1991);

⁵Hustler (1985), Herremans & Herremans (1992);

⁶+ field data MH (6 males);

⁷Generally said to have no proper song flight (Maclean 1969, Jensen 1991), but aerial display recently observed (Herremans-Tonnoeyr & Herremans 1993).

superspecies *curvirostris/chuana* can be considered at least as distinct from all other southern African larks as is the Spike-heeled Lark (*albofasciata*), generally placed now in its own monotypic genus *Chersomanes*. We recommend restricting the use of *Certhilauda* to the *curvirostris/chuana* superspecies.

The three morphologically distinct assemblages into which the wide radiation of subspecies currently allocated to the Long-billed Lark can be classified (Dean & Keith 1992) also need more careful study. The very long-billed and heavily-marked birds, with long, straight hindclaws, may well constitute the species Long-billed Lark *sensu stricto*, while other races might constitute a third or even fourth *Certhilauda* species. Alternatively, some of the less marked, more rufous taxa, with shorter, straighter bills, might prove to be subspecies of *chuana*. The range of vocal dialects in *chuana* at least suggests this possibility (Herremans in prep.). The poorly-known eastern African Somali Lark (*somalica*), currently placed in *Mirafra* but originally described by Witherby (1903) as a *Certhilauda*, is morphologically indeed close to *Certhilauda* (*sensu stricto*) and may represent a cross-equatorial link to this genus. It also makes a short courtship flight, has long clear whistling vocalizations and builds an undomed nest (Archer & Godman 1961).

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On the taxonomy of the western Mediterranean islands populations of Subalpine Warbler *Sylvia cantillans*

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The Subalpine Warbler *Sylvia cantillans* is a common breeding species in the Mediterranean Basin. Its European range extends from the Iberian Peninsula through southern France, most of Italy (including Sicily), coastal former Jugoslavia, Albania, southern Bulgaria and Greece to western Turkey; and from Morocco to Tunisia in North Africa (Peters 1986, Cramp 1992). The breeding range also includes the islands of Corsica, Sardinia, and Majorca and Cabrera in the Balearic Islands (Thibault 1983, Cramp 1992, Gargallo 1993). Three subspecies have been recognized: nominate *cantillans* in southwestern Europe from Italy westwards, including the western Mediterranean islands; *albistriata* from the former Jugoslavia eastwards; and *inornata* in North Africa (Vaurie 1959, Williamson 1976, Peters 1986).

There are no or only very slight subspecific differences in female plumage (Williamson 1976). Males, however, in spring plumage show distinctive features (Williamson 1976, Cramp 1992, Svensson 1992): the race *albistriata* differs from nominate *cantillans* and *inornata* by having a broader white moustachial streak, slightly darker upperparts, and a more chestnut-brown, less orange, throat and breast clearly demarcated from the more pure white belly and less coloured sides of belly and flanks; nominate *cantillans* has a reddish-orange (or pinkish-chestnut) colouration on the underparts extending farther down and to the sides, unlike *albistriata*; *inornata* differs from *cantillans* by having purer orange-coloured underparts.